

REMARKS

Claims 33-64 are now in the application. Claims 33-35, 37-53, 56, 63 and 64 read on the elected species. Claims 36, 54, 55 and 57-62 read on non-elected species. It is requested that these claims be rejoined since they ultimately depend from claim 33.

The recent personal interview granted by Examiner Mullis is hereby noted with appreciation. As discussed the interview claims 63 and 64 have been amended for purposes of clarification and not to restrict their previous scope.

In particular, claim 63 has been amended to recite "straight-chain" in place of "linear". Support can be found at page 6, line 32 of the specification. In addition, claim 63 has been amended to recite "to obtain an AB block copolymer, an ABA block copolymer or a straight-chain copolymer" at the end of the claim.

Claim 64 has been amended to recite "said vinyl polymer (I) has an alkenyl group at one terminus, and an initiator group at the other terminus" in place of "the number of said alkenyl group in said polymer (I) is identical with the number of said initiator group in said polymer (I)". Support for this change can be found on page 49, the last line to page 50, line 10.

The amendments to the claims do not introduce any new matter or raise any new issues.

Claims 33-64 were rejected under 35 U.S.C. § 112, first paragraph in the recitation of using a polymer I having two alkenyl groups per molecule. This rejection of the claims is not deemed tenable. As discussed at the interview, the claimed method is enabled as shown in the Examples 1-4 of the present specification.

The Examiner stated that Applicants' process is the same as that of Matyjaszewski et al. in that the living free radical polymerization utilizing a copper I halide and an unsaturated organic halo compound is described in scheme 5 of the patent as producing a multifunctional polymer not a polymer having two alkenyl groups. Also, it is stated that Applicants' own specification also discloses that their process proceeds by use of an unsaturated organic halo compound and a copper I halide catalyst as for instance in Applicants' Example 2.

Applicants respectfully disagree with the above.

Scheme 5 in Matyjaszewski suggests polymerization of only the unsaturated organic halo compound in the presence of the copper I halide. This is different from the process of the claims,

which recite the step of adding an alkenyl-containing polymer (I) to a living radical polymerization system or a living radical polymerization system.

Example 2 in the instant specification describes polymerization of isobutylene with polystyrene having allyl group and chloro group to obtain a multiblock copolymer. This differs significantly from the Scheme 5 in Matyjaszewski.

Additionally, contrary to the statement in the Office Action that it does not reasonably appear that Applicants would obtain the polymer I having only two alkenyl groups, the specification does adequately disclose obtaining such a polymer I.

In particular, the polymer (I) can be produced based upon the description on page 35, line 13 to page 54, line 25, and in particular methods for introducing terminal alkenyl group into polymers are disclosed on page 36, line 11 to page 49, line 16. This disclosure enables a person skilled in the art to prepare the polymer I having only two alkenyl groups. In fact, Production Example 11 in the instant specification produced a polymer having 1.96 (about 2) vinyl groups. Also see page 7, line 4 of the specification.

Moreover, the specification as filed does disclose a process in which a polymer having two alkenyl groups per molecule and a bifunctional initiator. For example, please see page 55, lines 9-11 in the instant specification.

Claim 63 was rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 5,789,487 to Matyjaszewski et al. Matyjaszewski does not render obvious claim 63.

Claim 63 is directed to a process for producing an AB block copolymer, an ABA block copolymer or a straight-chain multiblock copolymer. These recitations are not disclosed by Matyjaszewski. Also, Matyjaszewski does not provide any means for producing an AB block copolymer, an ABA block copolymer or a straight-chain multiblock copolymer.

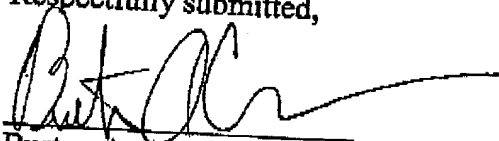
Hence claim 63 would not have been obvious over Matyjaszewski.

In view of the above, consideration and allowance are, therefore, respectfully solicited.

In the event the Examiner believes an interview might serve to advance the prosecution of this application in any way, the undersigned attorney is available at the telephone number noted below.

The Director is hereby authorized to charge any fees, or credit any overpayment, associated with this communication, including any extension fees, to CBLH Deposit Account No. 22-0185.

Respectfully submitted,



Burton A. Amernick (24,852)
Customer Number 30678
Connolly Bove Lodge & Hutz LLP
1990 M Street, N.W.
Washington, D.C. 20036-3425
Telephone: 202-331-7111

Date: 9-25-03

RECEIVED
CENTRAL FAX CENTER
SEP 26 2003

OFFICIAL

09/446,521

8

Received from <2022936229> at 9/25/03 10:27:42 AM [Eastern Daylight Time]

TOTAL P.11